



## **TENTATIVE PROGRAM**

### **V. Terrestrial Radionuclides in Environment International Conference on Environmental Protection**



**17-20<sup>th</sup> May 2016**  
**Veszprém, Hungary**

## 17/05/2016 TUESDAY

**8:00-12:00**      **Registration**

### **OPENING CEREMONY**

**9:00** *András Gelencsér* (Rector, University of Pannonia): Official Opening

**9:10** *Tibor Kovács* (Institute of Radiochemistry and Radioecology, University of Pannonia)

**9:20** *Géza Sáfrány* ("Frédéric Joliot-Curie" National Research Institute for Radiobiology and Radiohygiene)

### **Session I. Radon survey**

**Session chair:** *Harry Friedman, István Csige*

**9:40**      *K. Zs. Szabó, T. Kovács*: Radon survey in Hungary

**10:00**      *D. Maletic, V. Udovicic, M. E. Savkovic, G. Pantelic, P. Ujic, I. Celikovic, S. Forkapic, D. Nikezic, V. Markovic, V. Arsic, J. Ilic* : Representativeness of the first national indoor radon survey in Serbia

**10:20**      *Zs. Homoki, P. Rell*: Experiences of radiohygiene examination of buildings in Hungary

**10:40**      *V. Gruber, W. Ringer, G. Wurm*: A new radon map for Austria – First results from a pilot survey in Upper Austria

**11:00**      **COFFEE BREAK**

**11:20 - 12:10**  
*introduction of sponsors*

**11:10 – 12:10**  
*Radon Action plan*

**12:20-13:20**      **LUNCH**

## Session II. Radon measurements II.

Session chair: *Janja Vaupotic, Zsolt Homoki*

- 13:20** *V. Jobbágy, B. Mátè, M. Hult*: A brief overview on radon measurements in drinking water
- 13:40** *E. Sóki, I. Csige, S. Gyila*: Radon anomalies in dry carbon-dioxide spas of Eastern Transylvania, Romania
- 14:00** *A. M. Sanchez, M. J. Nuevo*: Some preliminary results obtained when indoor radon mitigation methods are applied
- 14:20** *P. Bossew, G. Cinelli, T. Tollefsen, M. De Cort*: Towards a multivariate geogenic radon hazard index

**14:40** **COFFEE BREAK**

## Session III. Radon in environment

Session chair: *Weihai Zhuo, Katalin Szabo*

- 15:00** *D. Fan, W. Zhuo, B. Chen, C. Zhao, W. Zhang*: Uncertainty due to overlap correction in radon measurement with SSNTD
- 15:20** *M. Moldovan, B.-D. Burghele, C. Roba, C. Cosma, H. Mitrofan, C. Buterez*: Radon assessment in water samples from the aspiring Buzău Land Geopark
- 15:40** *PERRI* Preliminary results of radon survey in Hungarian kindergartens
- 16:00** *PERRI* Th exhalation measurement protocol / Radon activity concentration measurement and dose assesement of underground mine workers during remediation processes. Focus on new EU-BSS and Hungarian legislation

**16:40** **COFFEE BREAK**

## Session IV. Radon

Session chair: *Shinji Tokonami, Tamas Vigh*

- 17:00** *B. Madas*: Radon induced hyperplasia modulates the basal cell doses in the bronchial epithelium
- 17:20** *J. Vaupotič, N. Smrekar, I. Kobal, J. P. McLaughlin, Z. S. Žunić*: Comparison of effective doses based on different radon monitoring approaches
- 17:40** *P. Kolarz, J. Vaupotič, I. Kobal, Z. S. Žunić*: Space distribution of air ions, thoron and radon in indoor air
- 18:00** *M. Bahtijari, G. Nafezi, D. Kikaj, A. Csordás, G. Hodoll, S. Kadiri T.*: RADON CONCENTRATION IN THERMAL WATER OF KOSOVO'S SPAS
- 18:20** *PERRI*: Radon survey at SNOLAB (Canada)

**13:30 – 17:00**

**NORM4Building**

**COST Action TU 1301**

## 18/05/2016 WEDNESDAY

### Opening

**9:00** *Pavel Povinec*: Fukushima impact on environmental radioactivity: five years of investigations

### Session V. NORM

**Session chair:** *Cristina Nuccetelli, Zoltan Sas*

**9:30** *V. Jovanov, O. Rudic, B. Angjusheva, J. Ranogajec, E. Fidanchevski*: Impact of fly ash incorporated in the clay matrix

**9:50** *G. Bator, PERRI* : DATA MINING TO VALIDATE THE RADIOLOGICAL DATABASE FOR THE MANAGEMENT OF NORM

**10:10** *T. Vaasma, M. Kiisk, E. Realo, J. Loosaar, A. H. Tkaczyk*: Radionuclide concentration variations in residues from potential NORM industries in Estonia: the example of oil shale-fired power plants

**10:30** *T. Croymanplgahki*: Variation of natural radionuclides in non-ferrous fayalite slags during a one-month production period.

**10:50** *Z. Sas* Introduction of By-BM H2020 MSCA-IF Project

**11:10** **COFFEE BREAK**

### Session VI. Radon

**Session chair:** *Konstantin Kovler, János Somlai*

**11:20** *H. Friedmann, A. Baumgartner, V. Gruber, H. Kaineder, F. J. Maringer, W. Ringer, C. Seidel*: The Uncertainty in the Radon Hazard Classification of Areas as a Function of the Number of Measurements

**11:40** *F. Leonardi, R. Trevisi*: Exposure to indoor radon in archaeological underground environments

**12:00** *I. Csige, E. B. Búzás, L. Menyhárt*: Identification of sources of indoor thoron by measurements of its spatial distribution

**12:20** *T. Tene, M. Capua*: Radon assessment of volcanic tuff of the Lazio region, Italy

**12:10-13:10** **LUNCH**

## Opening

- 13:10** **S.K. Sahoo:** S. S. Mishra,b, S.K. Sahoo, P. Bossew, N. Kavasi and S. Tokonami: Vertical migration of radio-caesium derived from the Fukushima Dai-ichi Nuclear Power Plant accident in undisturbed soils of grass land and forest

## Session VII. NORM

**Session chair:** *Pavel Povinec, Csaba Szabo*

- 13:40** *J. Pena Dembo, P. Völgyesi, Zs. Szabó, Z. Kis, Cs. Szabó:* Radioactivity levels in Angolan Adobe building material – comparative study of three areas
- 14:00** *PERRI:* Th-232 and Po-210 content of red mud
- 14:20** *B. Michalik* NORM contaminated area identification based on radionuclides activity concentration pattern in a soil profile
- 14:40** Zs. Molnár, M. Polgári, L. Bíró, I. Gyollai, T. Vigh: Fossilized biomats as the possible source of high radionuclide content at the early- Jurassic Úrkút manganese ore deposit

## 15:00 COFFEE BREAK

## Session VIII. NORM

**Session chair:** *Volodymyr Maslyuk, Éva Kovács-Széles*

- 15:20** *R. Incze*
- 15:40** Emad Hamed Ghanim: Environmental Investigations of Uranium and Thorium Determination in Granitic Rock Samples by Active and Passive Detectors
- 16:00** *P. Jovanovic:* The impact of fly ash deposition to the local environment
- 16:20** *A. Sharp, S. Landsberger, S. Wang, Y. Pontikes, A. Tkaczyk:* Assessment of Radiological Safety by experiment and Simulation: Characterization of Bauxite Residue (Red Mud) for <sup>235</sup>U, <sup>238</sup>U, <sup>232</sup>Th, and <sup>40</sup>K using Neutron Activation Analysis and the Radiation Dose Level as Modeled by MCNP
- 16:40** *M. Lajos, L.Juhász, Á. Szarkáné Németh:* Unified TENORM data survey

**13:30 – 17:00**

**NORM4Building**

**COST Action TU 1301**

**17:30** Excursion to ÚRKÚT (manganese mine)

**19/05/2016 THURSDAY**

**Opening**

**9:00** *Ákos Horváth, MTA EK*

**Session IX. TREICEP**

**Session chair:** *Masahide Furukawa, Tibor Kovacs*

**9:30** *M. Frontasyeva:* Monitoring long-term and large-scale deposition of pollutants based on moss analyses

**9:50** *I. I. Suliman, I. Al-Khanbashi, F. Al Sidairi, A. Gismelseed, AD. AD Al-Rawas:* RADIOACTIVITY CONCENTRATIONS AND ASSOCIATED GAMMA ABSORBED DOSE RATES IN COASTAL MARINE SEDIMENTS OF ARABIAN SEA, GULF OF OMAN

**10:10** *I. Potoki, O. Parlag, A. Lengyel, V. Maslyuk, Z. Tarics:* Determination of <sup>137</sup>Cs in samples of urban surface soils

**10:30** *Hao Le:* Gross Alpha And Beta Activity And Annual Committed Effective Dose Due To Natural Radionuclides In Some Ipomoea Aquatica Samples In Ho Chi Minh City

**10:30** **COFFEE BREAK**

**Session X. TREICEP**

**Session chair:** *Natasa Todorovich, Ákos Horváth(ELTE)*

**10:50** Zhen Yang: A new approach for discriminative measurements of environmental radiations

**11:10** Weihai Zhou: Mapping the baseline of terrestrial gamma radiation in China

**11:30** Deoffrey Millward: Bioaccessibility of U, Th and Pb in solid waste and soils from an abandoned uranium mine

**11:50** Aysun Ugur Gorgun: <sup>210</sup>Po and <sup>210</sup>Pb Atmospheric Fluxes in İzmir, Turkey

**12:10-13:10** **LUNCH**

**Opening**

**13:10** *Noémi Nagy (University of Debrecen)* Tracer Applications of Terrestrial Radionuclides

**Session XI. TREICEP**

**Session chair:** *Alan Tkaczyk, Edit Tóth-Bodrogi*

**13:40** *O. Salek, M. Matolin, K. Johnova:* Gamma-ray fields of size-limited uranium objects: modelling and possibilities of localization by ground gamma-ray survey

**14:00** *R.-Cs. Begy, Sz. Kelemen, L.Preoteasa, H.Simon:* Variations in sedimentation rates and dynamics in the lake system between the Chilia and Sulina branches of the Danube (Danube Delta, Romania)

- 14:20** *A-R. Iurian, A. Taylor, G. Millward, W. Marshall, W. Blake:* Historical Record of Anthropogenic Inputs in Salt Marsh Sediments from United Kingdom using a multiproxy approach
- 14:40** *P. Völgyesi, Zs. Szabó, Z. Kis, Cs. Szabó:* Ra-226 – U-238 secular equilibrium and Ra-226 activity concentration determination of Hungarian coal slag samples in a low-background counting chamber

**15:00** **COFFEE BREAK**

## **Session XII. TREICEP**

**Session chair:** *Doina Humelnicu, Viktor Jobbágy*

- 15:20** *Z. Kassai:* Radioanalytical investigation of drinking water
- 15:40** *V. Maslyuk, N. Svatyuk, O. Parlag, Z. Tarics, O. Symkanich, S. Sukharev:* Mapping of the terrestrial radionuclides and heavy metals distribution in mountain carpatian areas
- 16:00** *H. Simon, C. Constantin, R-Cs. Begy:* Sediment dynamics in the St. Anna Lake (Romania) preliminary results
- 16:20** *M. Krmar:* The results of the first large – scale measurement of spatial distribution of <sup>7</sup>Be and natural radionuclides accumulated in mosses
- 16:40** *M. Polgári, Sz. Bérczi, K. Horiuchi, H. Matsuzaki, T. Kovács, S. Józsa, Zs. Bendő, K. Fintor, J. Fekete, Z. Homonnay, E. Kuzmann, A. Gucsik, I. Gyollai, J. Kovács, I. Dódony:* Characterization and <sup>10</sup>Be content of ironcarbonate concretions for genetic aspects

**17:00** **COFFEE BREAK**

**17:20-17:50 Poster session**

**Session chair:** *Miodrag Krmar*

**18:30** **Happy hour (dinner)**

**20/05/2016 FRIDAY**

## **Opening**

**9:30** *Shinji Tokonami Shinji Tokonami*: Thoron ( $^{220}\text{Rn}$ ) interference on radon ( $^{222}\text{Rn}$ ) detecting system using solid-state nuclear track detectors and resulting issues

## **Session XIII. Environmental impact assessment**

**Session chair:** *Shinji Tokonami, Róbert Mészáros*

**10:00** *Leelőssy*: Simulation of dispersion of radionuclides in the atmosphere from regional to global scale.

**10:20** *PERRI* Radiostrontium monitoring in the vicinity of Bakony hills

**10:40** *B. D. Dung, T. V. Giap, T. Kovacs, T. N. Toan, L. D. Cuong, T. K. Minh, N. H. Quyet, N. V. Khanh*: Investigation of radiation hazard in Northeast Vietnam underground coal mines

**11:00** *PERRI* Radiological survey and monitoring of special remediated area in Hungary

**11:20** *PERRI* Radiological survey of remediated Zinc/Lead mine in Hungary

**11:40** **Closing remarks**

**12:00** **COFFEE BREAK**

## **List of poster presentation:**

1. *F. Fábrián, A. Csordás, T. Kovács*: DEVELOPMENT OF CALIBRATION PROTOCOL FOR CR-39 BASED SSNTDS USED FOR THORON CALIBRATION MEASUREMENTS
2. *M. Dahab, A.S. Alhag, I. Suliman, A.H. Osman*: DISTRIBUTION OF NATURAL RADIOACTIVITY AND ASSOCIATED GAMMA DOSE RATES IN RIVER SEDIMENTS FROM KHARTOUM STATE, SUDAN
3. *D. Joković, R. Banjanac, D. Maletić, V. Udovičić, M. Keržlin, S. Stošić, M. Serdar*: A STUDY ON RADIOACTIVITY OF ENVIRONMENTAL SAMPLES FROM THE VICINITY OF THE OBRENOVAC POWER PLANT
4. *O. Parlag, I. Potoki, A. Lengyel, V. Maslyuk, Z. Tarics*: METHOD FOR DETERMINING THE EQUIVALENT VOLUME ACTIVITY OF RADON ISOTOPES
5. *N. Todorovic, J. Hansman, J. Nikolov, S. Todorovic, M. Krmar*: ASSESSMENT OF NATURAL RADIOACTIVITY LEVELS IN BUILDING MATERIALS AND RESIDUES IMPORTED IN SERBIA
6. *K. Saini, B. Singh*: ASSESSMENT OF INDOOR RADON, THORON & THEIR PROGENY CONCENTRATION LEVELS ALONG WITH ANNUAL INHALATION DOSE IN DWELLINGS OF NE PUNJAB, INDIA
7. *D. Humelnicu, N. Vrinceanu, D. D. Dumitrascu, E. Popovici, N. Querfelli*: PHOTOCATALYTIC PROPERTIES OF THE SYSTEMS BASED ON URANYL-INCORPORATED SBA-15 MESOPOROUS SILICA
8. *I. Humelnicu, D. Humelnicu, S. Shova*: NEW URANIUM (VI) COMPLEX WITH 8-HYDROXYQUINOLINE
9. *B. Angjusheva, E. Fidancevska, V. Ducman, V. Jovanov*: PRODUCTION OF COAL BOTTOM ASH CERAMICS AND INFLUENCE OF THE MAIN PROCESS PARAMETERS ON THE PHYSICAL AND MECHANICAL PROPERTIES



10. A. I. Faurescu, I. Faurescu, C. Varlam, I. Vagner, D. Faurescu, D. Bogdan, D. Costinel: RADIOCARBON LEVEL IN THE ATMOSPHERE OF RAMNICU VALCEA, ROMANIA
11. J. Nikolov, N. Todorović, I. Stojković, A. Lazor, M. Tomić, M. Simikić, R. Micić, S. Forkapić: DETERMINATION OF BIOGENIC FRACTION IN LIQUID FUELS BY  $^{14}\text{C}$  LSC DIRECT METHOD
12. M. Furukawa, Y. Ishizu, J. Tsukayama, N. Ikemoto, N. Akata, M. Tanaka, T. Sanada: CONCENTRATIONS OF TRITIUM IN PRECIPITATION AND INLAND WATERS COLLECTED IN OKINAWA ISLAND, SOUTHWESTERN PART OF JAPAN
13. I. Vagner, C. Varlam, I. Faurescu, D. Faurescu, D. Bogdan, F. Bucura: INVESTIGATION ON PREPARATION TECHNIQUE FOR ORGANICALLY BOUND TRITIUM ANALYSIS FROM SEDIMENT
14. M. Polgári: A POSSIBLE ALTERNATIVE GENETIC INTERPRETATION OF THE MN-P-U-BE-REE MINERALIZATION, BÜKKSZENTKERESZT, BÜKK MTS., HUNGARY
15. D. Kikaj, S. Berisha, Z. Jeran, M. Bahtijari, P. Stegnar: NATURAL RADIONUCLIDES IN SOIL IN THE REGION OF PRIZREN
16. V. Srebrenkoska, V. Ducman, A. Sever Skapin, E. Fidancevska, B. Anguseva, V. Jovanov: INVESTIGATION OF THE POSSIBILITIES FOR APPLICATION OF NORM INTO POLYMER MATERIALS
17. B.-D. Burghele, M. Moldovan, C. Roba, C. Cosma, C. Buterez: INDOOR RADON DOSE ASSESSMENT FOR BUZĂU DWELLERS
18. Ivana Stojković: POSSIBILITIES AND LIMITATIONS OF RAPID 90SR SCREENING TEST IN MILK SAMPLES
19. Wouter Schroeyers: RADIOLOGICAL CHARACTERIZATION OF HIGH VOLUME BAUXITE RED MUD ALKALI ACTIVATED CEMENTS AND CONCRETES
20. Á. Freiler, Á. Horváth, K. Török: THE ORIGIN OF EXTREMELY HIGH RADON CONCENTRATION IN THE SOPRONBÁNFALVA GEODYNAMIC OBSERVATORY, HUNGARY
21. B. Czitrovsky, P. Füri, Zs. Bálint, Á. Jókay, P. Szántó, I. Balásházy: GAMMA AND NEUTRON RADIATION EFFECTS ON BUTTERFLIES
22. K. Csondor, A. Erőss, Á. Horváth, D. Sziebert: RADON AS A NATURAL TRACER OF ACTIVE CAVE FORMATION ZONES
23. Éva Kovács-Széles: ORIGIN ASSESSMENT OF NUCLEAR MATERIALS FOR NUCLEAR FORENSIC PURPOSES
24. E. Reizer, A.-I. Gabor, F. –L. Forray, R.-C. Begy: DIFFERENT POTENTIAL SYSTEMATIC UNCERTAINTIES INVOLVED IN  $^{210}\text{Pb}$  DATING METHOD
25. R.-Cs. Begy, Sz. Kelemen, E. Reizer, L. Preoteasa, H. Simon: SEDIMENTATION PROCESSES AND HEAVY METAL POLLUTION HISTORY IN CENTRAL DANUBE DELTA (ROMANIA)
26. E. H. Ghanim, A. Hussein, H. El Samman, H. Donya and M. Shehata: RADON CONCENTRATION MEASUREMENT AND DOSE EVALUATION IN SOME DWELLINGS AT MENOUEIYA DISTRICT IN EGYPT USING MAKROFOL DE1-1 NUCLEAR TRACK DETECTORS
27. N.Q. Long, L.D. Cuong, D.D. Thang, D.V. Thang: NATURAL RADIOACTIVITY AND EXTERNAL DOSE IN THE HANOI AREA, VIETNAM
28. PERRI: Radiological investigation of phosphorous fertilizers, leaching studies
29. PERRI: Intercomparison  $\text{Ra-226}$  measurements
30. Naofumi Akata, Hidenao Hasegawa, Shinji SUGIHARA, Masahiro Tanaka, Masahide Furukawa, Hideki Kakiuchi: TRITIUM CONCENTRATION AND  $\text{DD} \cdot \text{D18O}$  COMPOSITION OF MONTHLY PRECIPITATION COLLECTED AT TOKI, JAPAN.
31. G. Pantelić, J. Kaljević, D. Todorović, J. Krneta Nikolić, M. Rajačić, J. S. Petrović, M. Janković: CONCENTRATIONS OF RADIONUCLIDES IN SOIL AND ASSESSMENT OF THE ENVIRONMENTAL GAMMA DOSE
32. S. Harb, Karem M. Moubark, M. Boghdady and C. Walther: DELINEATING THE RADIOMETRY OF THE QUATERNARY AQUIFER BASED ON ITS HYDROLOGICAL AND HYDROCHEMICAL CHARACTERISTICS IN LUXOR AREA, UPPER EGYPT
33. Nataša B. Sarap, Marija M. Janković, Milica M. Rajačić, Željko K. Dolijanović, Aleksandar R. Đorđević, Dragana J. Todorović: IMPACT OF SOIL COMPOSITION ON THE NATURAL RADIONUCLIDES LEVEL IN TWO FARMING MANAGEMENT SYSTEMS

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